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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/658,618

09/09/2003

Yoshio Wada

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2537

7590 05/29/2007  
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EXAMINER
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PATHAK, SUDHANSHU C

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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05/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

58

<b>Office Action Summary</b>	<b>Application No.</b> 10/658,618	<b>Applicant(s)</b> WADA, YOSHIO	
	<b>Examiner</b> Sudhanshu C. Pathak	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on Sept. 9<sup>th</sup>, 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-16 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Sept. 9<sup>th</sup>, 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-to-16 are pending in the application.

#### ***Double Patenting***

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 & 3 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of the copending Application No. (PG-PUB: 2006/0234761). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to Claims 1 & 3, the copending claim 1 discloses an ultra-wideband transmitter (claim 1, line 1), comprising: a delay time controller for generating and inputting a periodic pulse to a first matched filter, outputting the periodic pulse to a second matched filter when data to be transmitted are at a first level of a binary logic level, and outputting the periodic pulse to a third matched filter when the data to be transmitted are at a second level of the binary logic level (claim 1, lines 2-8), wherein the first matched filter receives the periodic pulse from the delay time controller and outputs a reference signal for data determination (claim 1, lines 9-11), the second matched filter receives the periodic pulse from the delay time controller and outputs a first data signal earlier than the reference signal by a predetermined time (claim 1, lines 12-14), and the third matched filter receives the periodic pulse from the delay time controller and outputs a second data signal later than the reference signal by a predetermined time (claim 1, lines 15-17); an adder for adding outputs of the first, second, and third matched filters and outputting the added signal (claim 1, lines 18-19); and an antenna section for receiving the added signal from the adder and radiating the received added signal into the air (claim 1, lines 26-27). It would have been obvious to one of ordinary skill in the art at the time of the invention that the claim in the instant application is merely an obvious variation (broader than) of the claim in the copending application. It is well settled that omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 163 USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 184 (CCPA 1969). In light of the foregoing discussion, the claim

of the instant application is rejected as obvious double patenting over the narrower copending claim. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement an up converter (a mixer and a local oscillator) as in the copending application transmitter so as to be able to transmit the data to the receiver as the prescribed frequency band depending on the application of the network such as WLAN/cellular etc. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement an amplifier (power) in the transmitter so as to increase the reliability and range of the communications system.

4. Claim 2 (dependent on claim 1) is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of the copending (dependent on claim 1 of the copending application) Application No. (PG-PUB: 2006/0234761). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to Claim 2, the copending claim 2 discloses each of the reference signal, the first data signal, and the second data signal is a pattern signal including a plurality of periodic pulses (claim 2, lines 1-4). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that claim 2 of the copending application satisfies the limitations of the claim.

5. Claims 4 & 6 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 3 of the copending Application No. (PG-PUB: 2006/0234761). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to Claims 4 & 6, the copending claim 3 discloses an ultra-wideband wireless receiver (claim 3, line 1) comprising: an antenna section for receiving and outputting an electronic wave signal to first and second matched filters (claim 3, lines 2, 7-8, 11-12), wherein the first matched filter receives the electronic wave signal from the antenna section and outputs a first output signal when the first matched filter detects a reference signal for data determination (claim 3, lines 8-10), and the second matched filter receives the electronic wave signal from the antenna section and outputs a second output signal when the second matched filter detects a data signal (claim 3, lines 12-13); a delay time measuring section for detecting whether the first or second output signal is output first and outputting the detected result (claim 3, lines 14-17); and a data determining section for receiving the detected result from the delay time measuring section and determining whether the data signal is one of a first level and a second level of a binary logic level (claim 3, lines 18-20). It would have been obvious to one of ordinary skill in the art at the time of the invention that the claim in the instant application is merely an obvious variation (broader than) of the claim in the copending application. It is well settled that

omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In re Karlson, 163 USPQ 184 (CCPA 1963). Also note Ex parte Rainu, 168 USPQ 184 (CCPA 1969). In light of the foregoing discussion, the claim of the instant application is rejected as obvious double patenting over the narrower copending claim. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement a down converter (a mixer and a local oscillator) as in the copending application receiver so as to be able to convert the received signal to baseband signal. Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement an amplifier (low noise) in the transmitter so as to increase the reliability and range of the communications system.

6. Claim 5 (dependent on claim 4) is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of the copending (dependent on claim 3 of the copending application) Application No. (PG-PUB: 2006/0234761). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

In regards to Claim 5, the copending claim 4 discloses each of the reference signal, the first data signal, and the second data signal is a pattern signal including a plurality of periodic pulses (claim 4, lines 1-4). Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention that claim 2 of the copending application satisfies the limitations of the claim.

***Allowable Subject Matter***

7. Claims 7-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Claims 9-16 are allowable over the prior art of record.

***Conclusion***

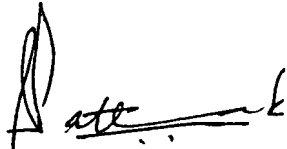
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.  
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571)-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sudhanshu C. Pathak  
Examiner  
Art Unit 2611